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**INSURANCE CLAIM: ENGINEERING APPRAISAL REPORT**

Name of Insured: Swan Housing Association Ltd

Address of Insured: Pilgrim House, High Street, Billericay, CM12 9XY

Situation of Damage: Flat 2, Kenilworth Place, BASILDON, Essex, SS15 4DQ



This report is prepared on behalf of Aviva for the purpose of investigating an insurance claim. It is not intended to cover any other aspect of structural inadequacy or building defect that may otherwise have been in existence at the time of inspection.

Date: 17/08/2023

Out Ref: 9743486



## **INTRODUCTION**

The technical aspects of this claim are being overseen by our Building Consultant Matthew Rawlins, in accordance with our project managed service.

The claim is primarily concerned with damage to the interior walls and ceilings and exterior walls of the subject property. All references to the property are as observed facing the front of the building.

## **DESCRIPTION OF BUILDING AND SITE**

The subject property is a 3-bedroom Mid terrace house likely constructed in the 1980s, in a residential estate on a plot that is level. The claim concerns damage to the internal wall and ceilings and to the external brickwork mainly to the rear of the property. There are signs of previous repairs both internally and externally from a previous subsidence claim. The recent damage was noticed by the site manager in 2021 once inspection recommenced after the Covid lock down period, it is believed the damage therefore occurred between early 2020 and Mid 2021. The damage is minor but widespread. The junction cracking to some area can be attributed to thermal expansion and possible differential movement.

## **DISCOVERY AND NOTIFICATION**

Circumstances of Discovery	Cracking noticed to interior and exterior walls
Subsequent action	Reported to insurers
Claim notification	Insurers were notified on 21/12/2022.

## **REPORTS BY OTHERS**

None

## **NATURE AND EXTENT OF DAMAGE**

Description and Mechanism	The main area of damage is to the interior walls and ceilings and exterior walls of the subject property and takes the form of Tapered and vertical cracking.
Significance	The level of damage is slight, and is classified as category 2 in accordance with BRE Digest 251 - Assessment of damage in low-rise buildings.
Onset and Progression	We consider that the crack damage has occurred recently, but that distortions are historic. It is likely that movement will be of a cyclical nature with cracks opening in the summer and closing in the winter.

## **SITE INVESTIGATION**

A site investigation consisting of 1 trail pits and 1 boreholes was carried out by CET on the 19/06/2023 the findings are as follows:

**Trail Pit:** A trail pit was dug to the middle of the rear bay window to a depth of 900 mm, the foundations were found to be of a 200mm thick concrete construction bearing down onto still brown clay at a depth of 700 mm.

The clay soil samples were tested and found to be of high plasticity (max PI of 59%) with an extremely high volumetric change potential.

Roots were found to the underside of the foundations down to a depth of 2200 mm.

The roots were of 1 mm in diameter and identified as belonging to either *Quercus* or *Castanea* species groups which includes Oaks and Sweet Chestnuts.

**Bore hole:** The trial pit was extended to a depth of 5500 mm. On completion the bore hole was dry and open on completion. The existing deep datum has been reused.

#### **CAUSE OF DAMAGE**

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Based on the information detailed above, we are of the opinion that damage has occurred due to clay shrinkage subsidence. This has been caused by moisture extraction by roots altering the moisture content of the clay subsoil, resulting in volume changes, which in turn have affected the foundations.

#### **MITIGATION**

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We consider the damage will not progress if appropriate measures are taken to remove the cause. In this instance it is likely that vegetation for which the adjoining private Third Party is responsible is contributing toward the cause of damage.

An arborists report will be required to establish mitigation measures.

#### **MONITORING**

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A programme of level monitoring is currently ongoing.

#### **REPAIR RECOMMENDATIONS**

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We have not decided on the final type of repair required as our investigations have not yet been concluded.

#### **PROJECT TEAM DETAILS**

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Matthew Rawlins Grad CABE - *Building Consultant Specialist Subsidence Team*

Tracey Horlock Cert CII - *Claims Technician Specialist Subsidence Team*

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